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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/085,331	COCCHI ET AL.
	Examiner	Art Unit
	Syed Zia	2131

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 17 April 2007.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-3,5-15,17-27,29-38,40-50 and 52-63 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-3,5-15,17-27,29-38,40-50 and 52-63 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____
- 5) Notice of Informal Patent Application
 6) Other: _____

DETAILED ACTION

1. This office action is in response to amendment and request for reconsideration filed on April 17, 2007. Original application contained Claims 1-28. Applicant currently added new Claims 59-63. Applicant previously amended Claims 1, 12, 24, 35, 47, and cancelled Claims 4, 16, 28, 39, and 51. Applicant's amendments filed on April 17, 2007 has been entered and made of record. Therefore, claims 1-3, 5-15, 17-27, 29-38, 40-50, and 52-63 are pending for further consideration.

Response to Arguments

Applicant's arguments filed on April 17, 2007 have been fully considered but they are not persuasive because of the following reasons:

Regarding Claims 1, 12, 24, 35, and 47 applicants argued that the system of cited prior art (CPA) [Cohen et al. (U. S. Patent 5,282,249), and Kocher (U.S. Patent 6,289,455)] does not teach or suggest, "*a single processor that controls multiple nonvolatile memory components that are physically separate and independently controlled* ", and also does not teach "*a single microprocessor that controls multiple nonvolatile memory components with separate memory access control restrictions*" with *separate memory access control restriction*", and "*the explicit*

claim limitations providing that separate and independent attacks must be conducted on each nonvolatile component to gain unauthorized access".

This is not found persuasive. The system of cited prior art teaches a system and method that relates to a number of selectable and portable executing devices, each being operatively associated with any one receiving descrambler and each executing identical operations to generate a seed for use by the associated receiving descrambler to enable the receiving descrambler to descramble the broadcast. The executing device includes a device for actively executing an algorithm (Fig.1-2, col.4 line 12 to line 66, col. 21 line 2 to col. 22 line 25). This system further discloses a cryptographic unit is connected in between a microprocessor and memory for protecting the memory from microprocessor by cryptographically transforming data communicated in between microprocessor and memory. The cryptographic unit for transforming data from microprocessor uses memory contents and transformation result is utilized to decode digital content. Cryptographic right unit CRU includes an interface control processor (ICP), which is responsible for communication with playback device via I/O interface. In addition, CRU includes several types of memory connected to interface control processor via bus. In particular, fixed data and code are stored in ROM, temporary data (and possibly code) are stored in RAM, and additional code and/or data are stored in EEPROM which can be modified by processor. Also attached to bus is CryptoFirewall, a specialized cryptographic processing unit which regulates and cryptographically modifies data written to or read from protected memory (Kocher: Fig.2, col.9 line 29 to line 59, and col.21 line 2 to col.22 line 25).

Thus the system of cited prior art provides a system and method for preventing unauthorized access to digital services.

Therefore, the examiner asserts that cited prior art(s) does teach or suggest the subject matter recited in independent and dependent claims. Accordingly, rejections for claims 1-3, 5-15, 17-27, 29-38, 40-50, and 52-63 are respectfully maintained.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-3, 5-15, 17-27, 29-38, 40-50, and 52-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen et al. (U. S. Patent 5,282,249), and further in view of Kocher (U.S. Patent 6,289,455).

2. Regarding Claim 1, Cohen teach and describe a system for controlling access to digital services comprising: (a) a control center configured to coordinate and provide digital services; (b) an uplink center configured to receive the digital services from the control center and transmit the digital services to a satellite (Fig. 1/1 Item 20); (c) the satellite configured to: (i) receive the digital services from the uplink center (Fig. 1/2 Item 22); (ii) process the digital services (Fig. 1/2 Item 22), and (iii) transmit the digital services to a subscriber receiver station

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(Fig. 1/2 Item 24); (d) the subscriber receiver station configured to: (i) receive the digital services from the satellite (Fig. 1/2 Item 26); (a) control access to the digital services through an integrated receiver/decoder IRD) (Fig. 1/2 Item 30); and (e)a conditional access module (CAM) communicatively coupled to the IRD (Fig. 1/2 Item 32), [col.4 line 12 to line 66],

Cohen do not disclose the CAM comprising nonvolatile protected memory component having state information to enforce desired functionality.

However, Kocher disclose the CAM (Fig.2 Item 225) comprising:

(i) a system bus; (ii) a plurality of physically separate and independently controlled nonvolatile memory components (col.21 line 13 to line 15), wherein access control to the digital services is distributed among the nonvolatile memory components (col. 21 line 2 to col. 22 line 25); and (iii) a microprocessor communicatively coupled to the nonvolatile memory components, wherein separate and independent attacks must be conducted on each nonvolatile memory component to gain unauthorized access to the digital services; and a microprocessor communicatively coupled to the nonvolatile memory, wherein the microprocessor is configured to use state information in the nonvolatile memory components to provide desired functionality and enforce one or more security policies (i.e. regulating access) for accessing the digital services, and wherein the microprocessor controls each of the plurality of nonvolatile memory components and each nonvolatile memory component has separate memory access and control restrictions (col.10 line 5 to line 47, col.5 line 55 to col.6 line 3, and col.24 line 10 to line 30).

Kocher is analogous art because it discusses a method and apparatus for preventing piracy of digital content including the use of a smart card.

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Therefore, It would have been obvious to one ordinary skilled in the art at the time of invention to include the teachings and features of CAM found in Kocher in the smart card used by Cohen, to control access to the broadcast data, because Kocher's method of protected memory of monitored data by using state information would not only promote security structure in the system of Cohen during receiving and distributing digital content (Kocher: Fig.1, col.5 line 55 to line 56, and col.6 line 65 to line 67) but will also provide safeguards against attempt by unauthorized person to breach security of system.

3. Regarding Claim 12, Cohen teach and describe a method of controlling unauthorized access to digital services (Fig.1-2)

Cohen do not disclose access control comprising nonvolatile protected memory component having state information to enforce desired functionality.

However, Kocher disclose the access control (Fig.2 Item 225) comprising: distributing access to digital services among a plurality of physically separate and independently controlled nonvolatile memory components on a system bus separate and independent attacks must be conducted on each nonvolatile memory component to gain unauthorized access to the digital services (col.21 line 13 to line 15, and col. 21 line 2 to col. 22 line 25); and

communicatively coupling the plurality of nonvolatile memory components to a microprocessor, wherein the microprocessor is configured to use state information in the nonvolatile memory components to provide desired functionality and enforce one or more security policies (i.e. regulating access) for accessing the digital services; and wherein the microprocessor controls each of the plurality of nonvolatile memory components and each

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nonvolatile memory component has separate memory access and control restrictions (col.10 line 5 to line 47, col.5 line 55 to col.6 line 3, and col.24 line 10 to line 30).

Kocher is analogous art because it discusses a method and apparatus for preventing piracy of digital content including the use of a smart card.

Therefore, It would have been obvious to one ordinary skilled in the art at the time of invention to include the teachings and features of access control found in Kocher in the smart card used by Cohen, to control access to the broadcast data, because Kocher's method of protected memory of monitored data by using state information would not only promote security structure in the system of Cohen during receiving and distributing digital content (Kocher: Fig.1, col.5 line 55 to line 56, and col.6 line 65 to line 67) but will also provide safeguards against attempt by unauthorized person to breach security of system.

4. Regarding Claim 24, Cohen teach and describe a method of accessing digital services (Fig.1-2).

Cohen do not disclose access control comprising nonvolatile protected memory component having state information to enforce desired functionality.

However, Kocher disclose the access control (Fig.2 Item 225) comprising:

storing state information in a plurality of nonvolatile memory components, wherein the plurality of nonvolatile memory components are physically separate and independently controlled, wherein separate and independent attacks must be conducted on each nonvolatile memory component to gain unauthorized access to the digital services (col.21 line 13 to line 15, and col. 21 line 2 to col. 22 line 25);

accessing digital services using the nonvolatile memory components wherein the state information is used to provide desired functionality and enforce one or more security policies (i.e. regulating access) for accessing the digital services, and wherein the microprocessor controls each of the plurality of nonvolatile memory components and each nonvolatile memory component has separate memory access and control restrictions (col.10 line 5 to line 47, col.5 line 55 to col.6 line 3, and col.24 line 10 to line 30).

Kocher is analogous art because it discusses a method and apparatus for preventing piracy of digital content including the use of a smart card.

Therefore, It would have been obvious to one ordinary skilled in the art at the time of invention to include the teachings and features of access control found in Kocher in the smart card used by Cohen, to control access to the broadcast data, because Kocher's method of protected memory of monitored data by using state information would not only promote security structure in the system of Cohen during receiving and distributing digital content (Kocher: Fig.1, col.5 line 55 to line 56, and col.6 line 65 to line 67) but will also provide safeguards against attempt by unauthorized person to breach security of system..

5. Regarding Claim 35, Cohen teach and describe a system for controlling access to digital services (Fig1-2)

Cohen do not disclose the CAM comprising nonvolatile protected memory component having state information to enforce desired functionality.

However, Kocher teaches a method conditional access module (CAM) to digital services (Fig.2 Item 225) comprising: (i) a system bus; (ii) a plurality of physically separate and independently

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controlled nonvolatile memory components, and wherein separate and independent attacks must be conducted on each nonvolatile memory component to gain unauthorized access to the digital services (col.21 line 13 to line 15), wherein access control to the digital services is distributed among the nonvolatile memory components (col. 21 line 2 to col. 22 line 25); and (iii) a microprocessor communicatively coupled to the nonvolatile memory components, wherein the microprocessor is configured to use state information in the nonvolatile memory components to provide desired functionality and enforce one or more security policies (i.e. regulating access) for accessing the digital services and wherein the microprocessor controls each of the plurality of nonvolatile memory components, and each nonvolatile memory component has separate memory access and control restrictions (col.10 line 5 to line 47, col.5 line 55 to col.6 line 3, and col.24 line 10 to line 30).

Kocher is analogous art because it discusses a method and apparatus for preventing piracy of digital content including the use of a smart card.

Therefore, It would have been obvious to one ordinary skilled in the art at the time of invention to include the teachings and features of CAM found in Kocher in the smart card used by Cohen, to control access to the broadcast data, because Kocher's method of protected memory of monitored data by using state information would not only promote security structure in the system of Cohen during receiving and distributing digital content (Kocher: Fig.1, col.5 line 55 to line 56, and col.6 line 65 to line 67) but will also provide safeguards against attempt by unauthorized person to breach security of system.

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6. Regarding Claim 47, Cohen teach and describe an article of manufacture for preventing unauthorized access to digital services (Fig.1-2).

Cohen do not disclose access control comprising nonvolatile protected memory component having state information to enforce desired functionality.

However, Kocher disclose the access control (Fig.2 Item 225) comprising:

means for distributing access control to digital services among a plurality of physically separate and independently controlled nonvolatile memory components on a system bus, and wherein separate and independent attacks must be conducted on each nonvolatile memory component to gain unauthorized access to the digital services (col.21 line 13 to line 15, and col. 21 line 2 to col. 22 line 25); and

means for communicatively coupling the plurality of nonvolatile memory components to a microprocessor, wherein the microprocessor is configured to use state information in the nonvolatile memory components to provide desired functionality and enforce one or more security policies (i.e. regulating access) for accessing the digital services, and wherein the microprocessor controls each of the plurality of nonvolatile memory components and each nonvolatile memory component has separate memory access and control restrictions (col.10 line 5 to line 47, col.5 line 55 to col.6 line 3, and col.24 line 10 to line 30).

Kocher is analogous art because it discusses a method and apparatus for preventing piracy of digital content including the use of a smart card.

Therefore, It would have been obvious to one ordinary skilled in the art at the time of invention to include the teachings and features of access control found in Kocher in the smart card used by Cohen, to control access to the broadcast data, because Kocher's method of protected memory of

monitored data by using state information would not only promote security structure in the system of Cohen during receiving and distributing digital content (Kocher: Fig.1, col.5 line 55 to line 56, and col.6 line 65 to line 67) but will also provide safeguards against attempt by unauthorized person to breach security of system.

8. Claims 2-11, 13-23, 25-34, 36-47, and 48-58 are rejected applied as above rejecting Claim 1, 12, 24, 35, and 47. Furthermore, system of Cohen and Kocher teaches and describes a system and method for controlling access to digital services, wherein:

As per Claims 2,13, 25, 36, and 48, the conditional access module is a smart card (Cohen: Fig.1/1 Item 16, and Kocher Fig.2 Item 225).

As per Claim 3, 14, 37, and 49, the smart card further comprises: a volatile memory component; a custom logic block; and a system input/output module (col.4 line 22 to col.5 line 66).

As per Claim 15, 26, 38, and 50, the smart card is utilized in an integrated receiver/decoder (IRD) (Cohen: Fig. 1/2 Item 30, and Kocher Fig.2 Item 225).

As per Claim 27, a single microprocessor controls the nonvolatile memory components (Kocher: col.9 line 29 to line 40).

As per Claim 5, 17, 29, 40, and 52, each nonvolatile memory component implements an entirely unique memory access control logic (Kocher: col.23 line 36 to line 48).

As per Claim 6, 18, 30, 41, and 53, the plurality of nonvolatile memory components reside on a single chip (Kocher: Fig.2, col. 21line 2 to col. 22 line 25).

As per Claim 7, 19, 42, and 54, a charge pump is shared between the plurality of nonvolatile memory components (col. 21 line 2 to col. 22 line 25).

As per Claim 8, 20, 31, 43, and 55, programming control is shared between the plurality of nonvolatile memory components (col. 21 line 2 to col. 22 line 25).

As per Claim 9, 21, 32, 44, and 56, the plurality of nonvolatile memory components employ separate and unique address ranges (Kocher: col.27 line 25 to line 39).

As per Claim 10, 22, 33, 45, and 57, the plurality of nonvolatile memory components employ a single contiguous address range (Kocher: col.27 line 25 to line 39).

As per Claim 11, 23, 34, 46, and 58, separate access control units satisfy a functional requirement of each nonvolatile memory component (Kocher: col.10 line 5 to line 47, and col.5 line 55 to col.6 line 3).

As per Claims 59, and 62 wherein: (a) at least one of the plurality of physically separate and independently controlled nonvolatile memory components is protected, wherein: the protected nonvolatile memory component is protected from modification such that the protected nonvolatile memory component is read only; and access to the protected nonvolatile memory component is isolated (Fig.2, col.9 line 29 to line 59); (b) the CAM further comprises a microprocessor's unprotected nonvolatile memory component wherein the microprocessor's unprotected nonvolatile memory component and the protected nonvolatile memory component use physical and logical address ranges that ate the same (Kocher: col.27 line 25 to line 39).

As per Claims 60, 61, and 63, wherein (a) at least one of the plurality of physically separate and independently controlled nonvolatile memory components is protected, wherein: the protected nonvolatile memory component is protected from modification such that the protected

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nonvolatile memory component is read only; and access to the protected nonvolatile memory component is isolated (Kocher: Fig.2, col.9 line 29 to line 59); (b) a microprocessor's unprotected nonvolatile memory component and the protected nonvolatile memory component use physical and logical address ranges that are the same (Kocher: col.27 line 25 to line 39).

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claim 1, 12, 24, 35, and 47 of instant application 10085331 (hereafter '331) are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 8, 15, and 22 of copending Application No. 10085920 (hereafter '920). Although the conflicting claims are not identical, they are not patentably distinct from each other because in view of the obviousness type double patenting rationale enunciated in **Georgia-Pacific Corp. v. United States Gypsum Co.**, 195 F.3d 1322, 1326, 52 USPQ2d 1590, 1593 (Fed. Cir. 1999), the instant application's above mentioned claims merely define a system for controlling access to digital services where protected memory and

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microprocessor (device) share the control for access right management which is a obvious variation of access rights to digital services based charge pump and programming control of the invention as claimed in copending application '920.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Syed Zia whose telephone number is 571-272-3798. The examiner can normally be reached on 9:00 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SZ

July 6, 2007



SYED A. ZIA
PRIMARY EXAMINER